TEXT NOT RECORDED

FIG. 1

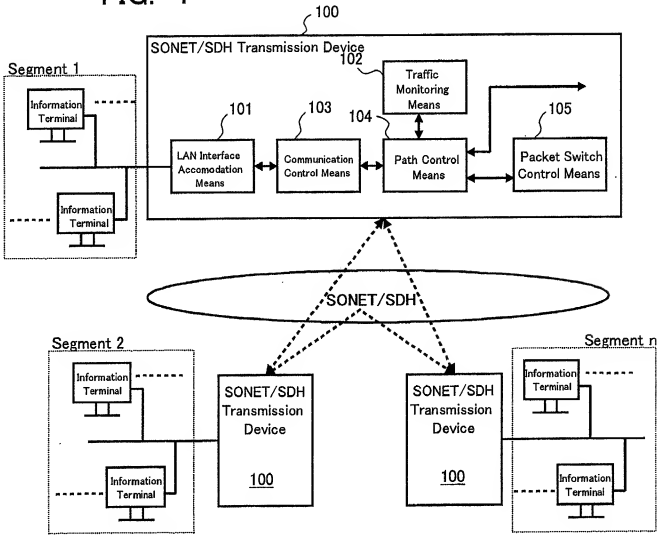

FIG. 2

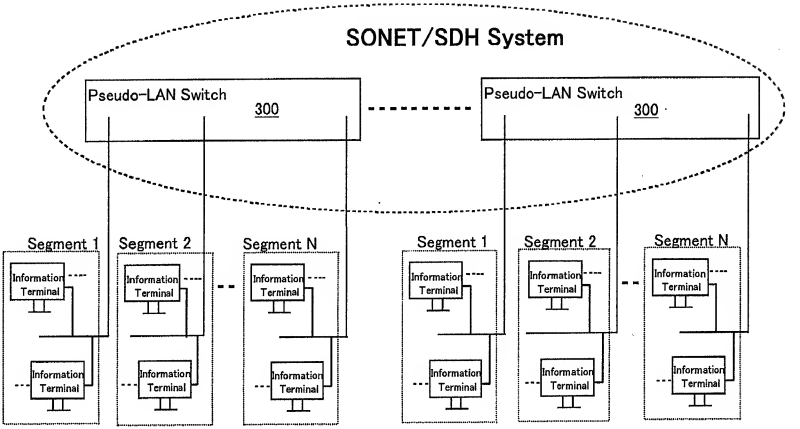
SONET/SDH System
Pseudo-LAN Switch
300
Pseudo-LAN Switch
300
Segment 1
Segment 2
Segment N
Segment 1
Segment 2
Segment N
Information Terminal

FIG. 3

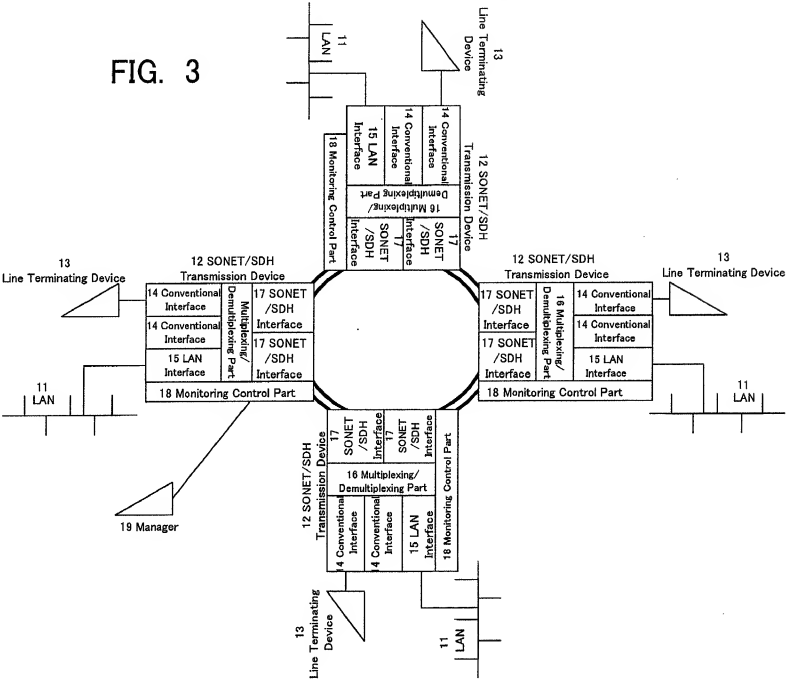
11 LAN
13 Line Terminating Device
14 Conventional Interface
14 Conventional Interface
15 LAN Interface
18 Monitoring Control Part
16 Multiplexing/ Demultiplexing Part
17 SONET /SDH Interface
17 SONET /SDH Interface
12 SONET/SDH Transmission Device
19 Manager

FIG. 4

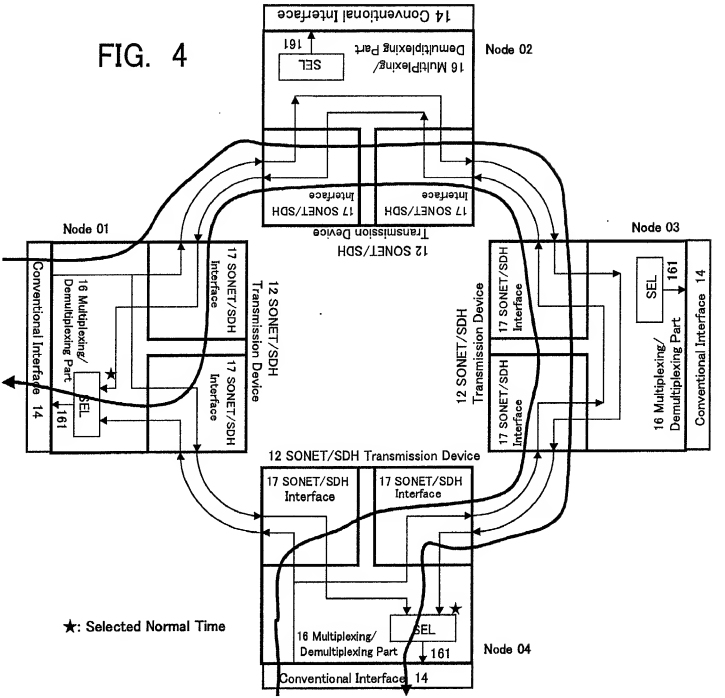
Node 01
Node 02
Node 03
Node 04
12 SONET/SDH Transmission Device
17 SONET/SDH Interface
16 Multiplexing/ Demultiplexing Part
SEL
161
Conventional Interface 14
★: Selected Normal Time

FIG. 5

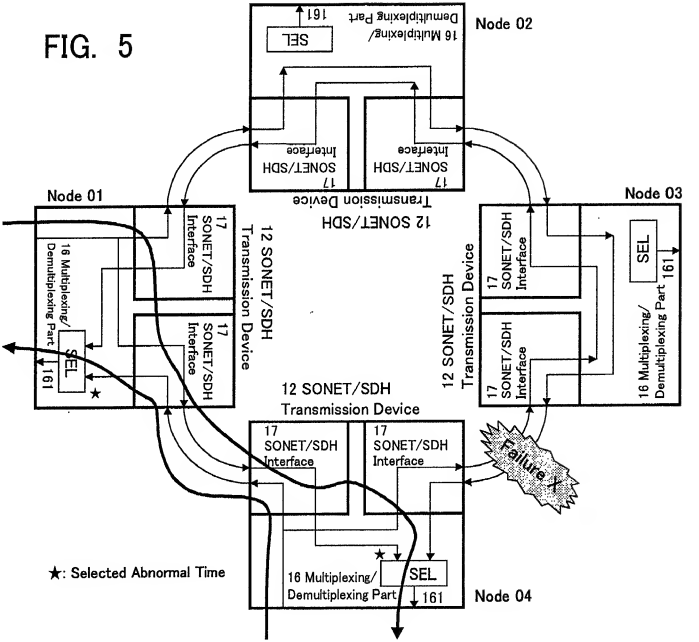
Node 01
Node 02
Node 03
Node 04
12 SONET/SDH Transmission Device
17 SONET/SDH Interface
16 Multiplexing/ Demultiplexing Part
SEL
161
Failure
★: Selected Abnormal Time

FIG. 6

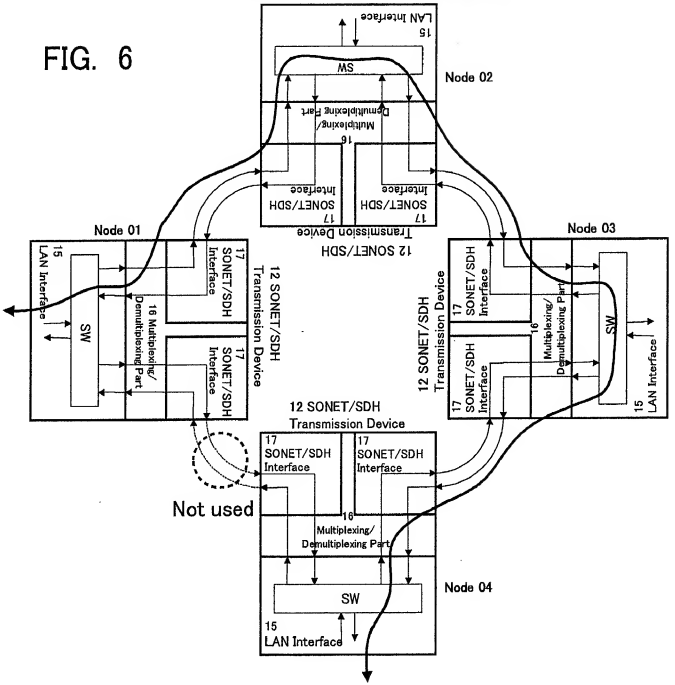
Node 01
Node 02
Node 03
Node 04
SW
LAN Interface
15
16
Multiplexing/
Demultiplexing Part
17
SONET/SDH
Interface
Transmission Device
12 SONET/SDH
12 SONET/SDH Transmission Device
Not used

FIG. 7

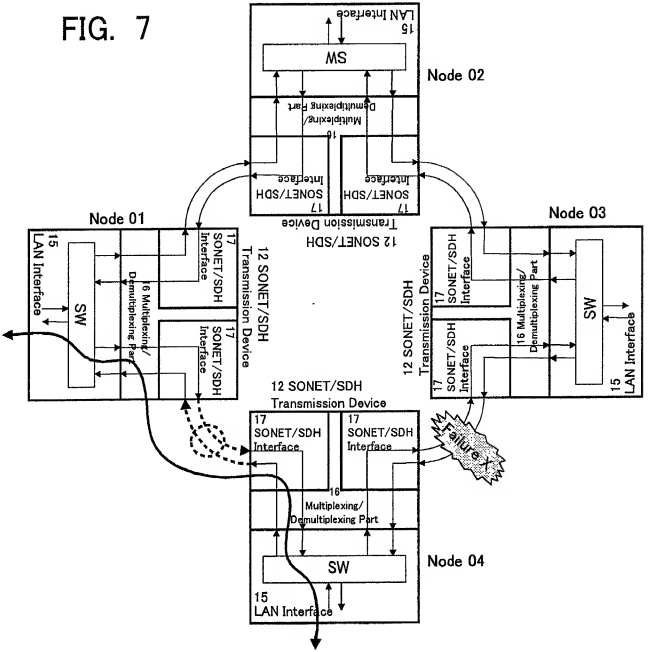
Node 01
Node 02
Node 03
Node 04
SW
LAN Interface
15
16 Multiplexing/ Demultiplexing Part
17 SONET/SDH Interface
12 SONET/SDH Transmission Device
Failure

FIG. 8

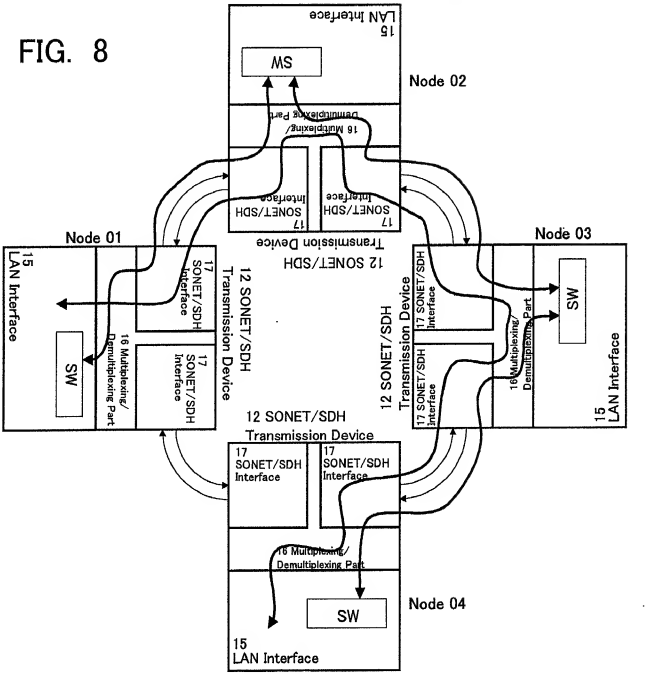
Node 01
15
LAN Interface
SW
16 Multiplexing/
Demultiplexing Part
17
SONET/SDH
Interface
17
SONET/SDH
Interface
12 SONET/SDH
Transmission Device
Transmission Device
12 SONET/SDH
Node 02
MS
15
LAN Interface
16 Multiplexing/
Demultiplexing Part
17
SONET/SDH
Interface
17
SONET/SDH
Interface
Node 03
SW
15
LAN Interface
Node 04
SW
15
LAN Interface

FIG. 9

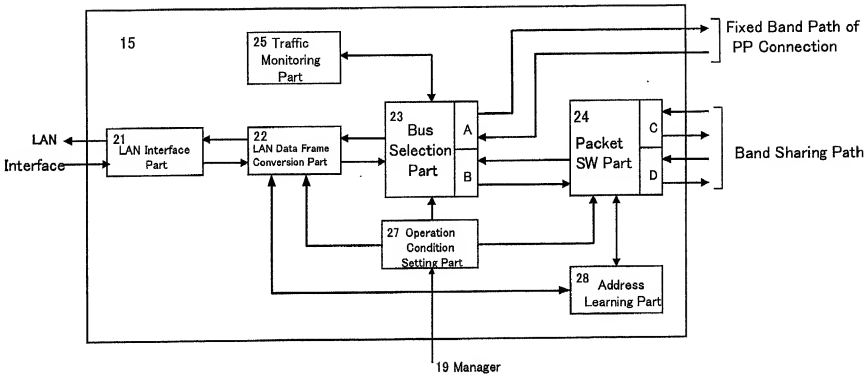
15
25 Traffic Monitoring Part
Fixed Band Path of PP Connection
LAN Interface
21 LAN Interface Part
22 LAN Data Frame Conversion Part
23 Bus Selection Part
A
B
24 Packet SW Part
C
D
Band Sharing Path
27 Operation Condition Setting Part
28 Address Learning Part
19 Manager

FIG. 10

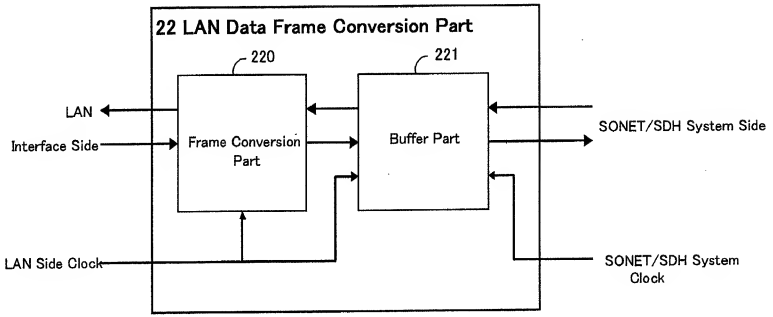
22 LAN Data Frame Conversion Part
220
221
LAN
Interface Side
Frame Conversion Part
Buffer Part
SONET/SDH System Side
LAN Side Clock
SONET/SDH System Clock

FIG. 11A

FIG. 11B

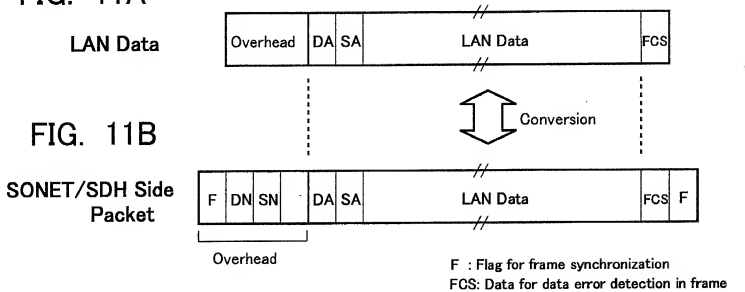

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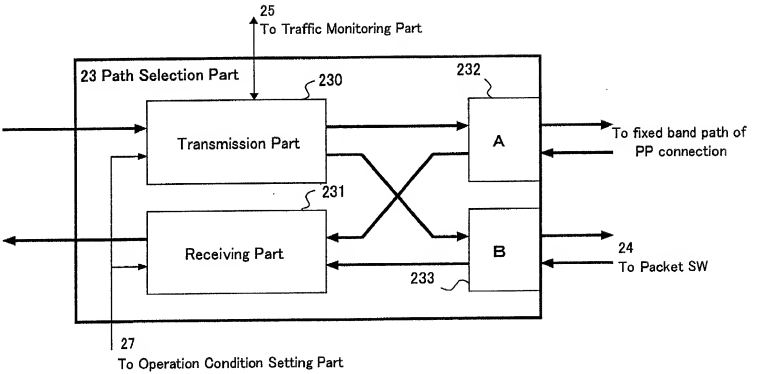
FIG. 12



TOSHIBA CORPORATION

FIG. 13

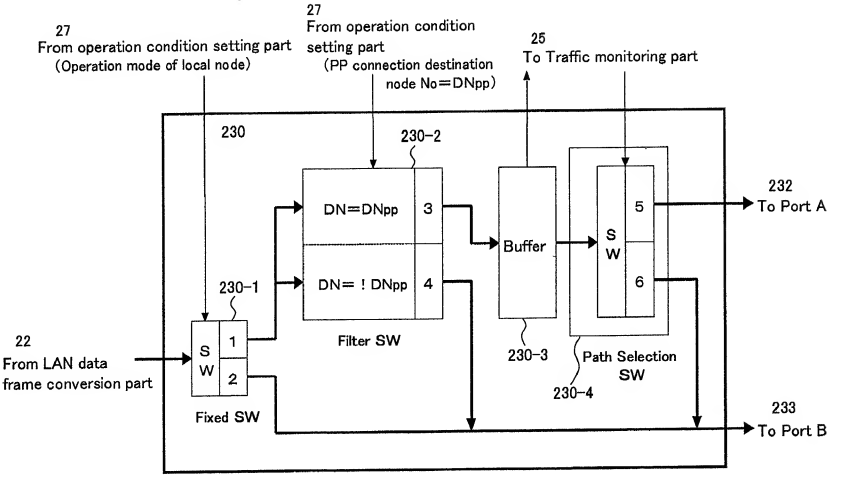


FIG. 14

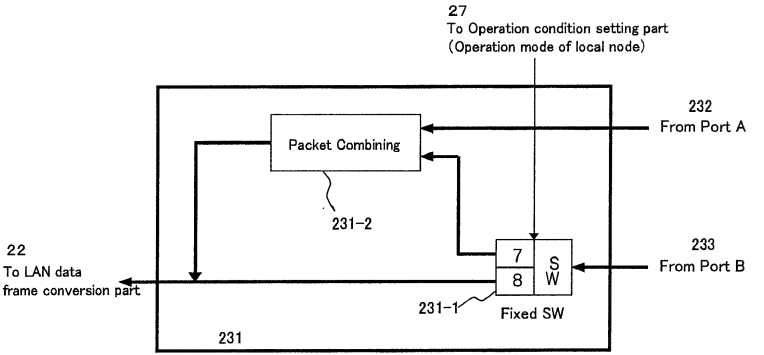

27
To Operation condition setting part
(Operation mode of local node)
232
From Port A
Packet Combining
231-2
22
To LAN data
frame conversion part
7
8
S
W
233
From Port B
231-1
Fixed SW
231

FIG. 15

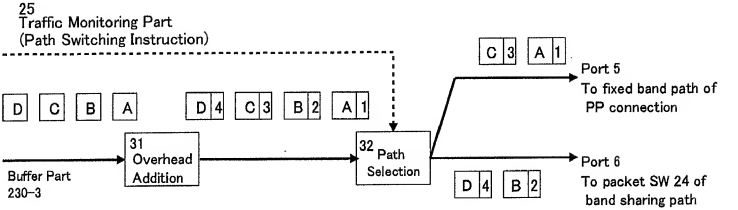

25
Traffic Monitoring Part
(Path Switching Instruction)
D C B A
D 4 C 3 B 2 A 1
Buffer Part
230-3
31
Overhead
Addition
32 Path
Selection
C 3 A 1
Port 5
To fixed band path of
PP connection
D 4 B 2
Port 6
To packet SW 24 of
band sharing path

FIG. 16

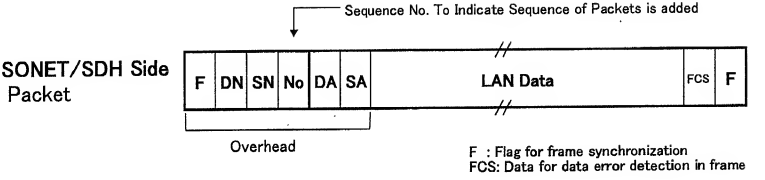

Sequence No. To Indicate Sequence of Packets is added
SONET/SDH Side
Packet
F
DN
SN
No
DA
SA
LAN Data
FCS
F
Overhead
F : Flag for frame synchronization
FCS: Data for data error detection in frame

FIG. 17

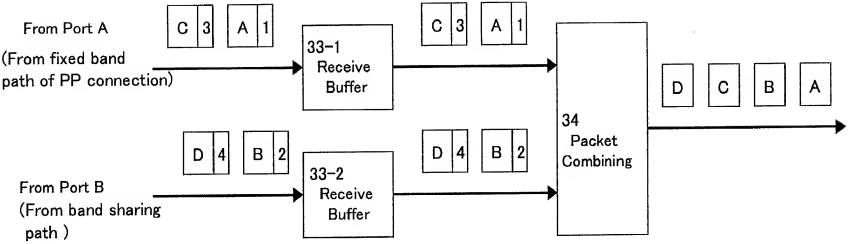

From Port A
(From fixed band path of PP connection)
C 3
A 1
33-1 Receive Buffer
C 3
A 1
From Port B
(From band sharing path)
D 4
B 2
33-2 Receive Buffer
D 4
B 2
34 Packet Combining
D
C
B
A

FIG. 18

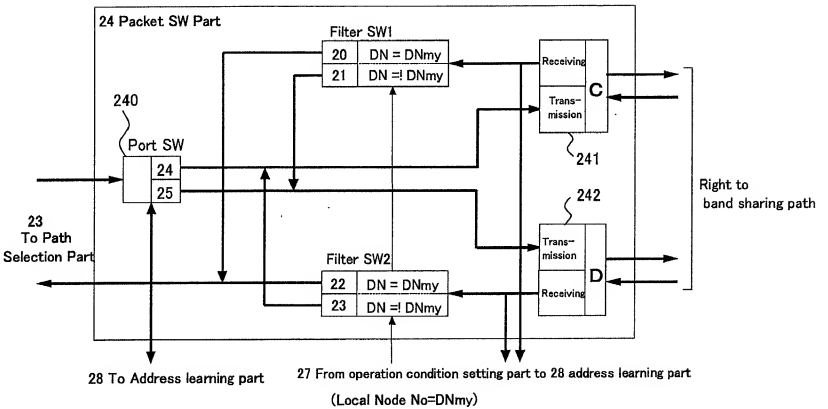

24 Packet SW Part
Filter SW1
20 DN = DNmy
21 DN =! DNmy
Receiving
Trans-mission
C
240
Port SW
24
25
241
242
Right to band sharing path
23 To Path Selection Part
Trans-mission
Filter SW2
22 DN = DNmy
23 DN =! DNmy
Receiving
D
28 To Address learning part
27 From operation condition setting part to 28 address learning part
(Local Node No=DNmy)

FIG. 19

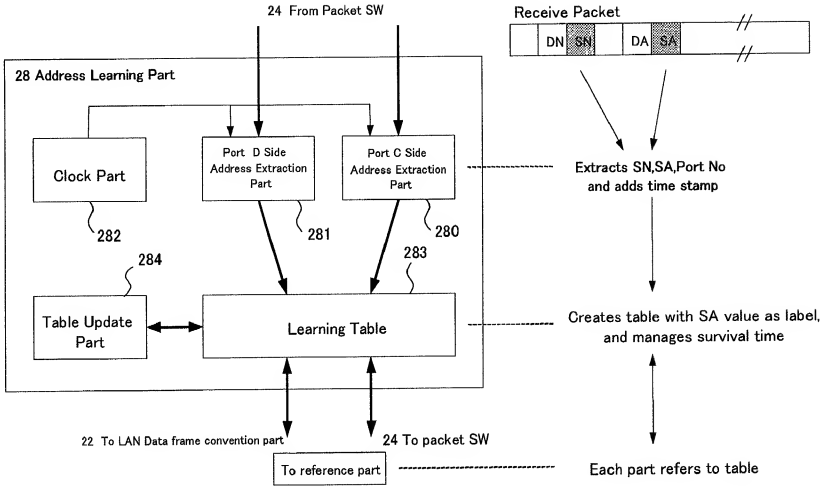

24 From Packet SW
Receive Packet
DN SN DA SA
28 Address Learning Part
Clock Part
Port D Side Address Extraction Part
Port C Side Address Extraction Part
Extracts SN,SA,Port No and adds time stamp
282
281
280
284
283
Table Update Part
Learning Table
Creates table with SA value as label, and manages survival time
22 To LAN Data frame convention part
24 To packet SW
To reference part
Each part refers to table

FIG. 20

Label (SA value from another node) (DA value from local node)	Data 1 (SN value from another node) (DN value from local node)	Data 2 (Node arrangement C or D)	Data 3 (Learning time)
Value 1	01	D	Time Stamp1
Value 2	03	C	Time Stamp2
Value 3	04	C	Time Stamp3
.	.	.	.
.	.	.	.
.	.	.	.

Example of Learning Table at Node 2